Quantum
MEDICAL IMAGING, LLC

Models QT-740 and QT-750

Fixed/Elevating Float-Top Radiographic Tables

Operator's Manual

Manual Part No. DC30-006 Revision A

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Made in U.S.A.

Revision History

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A	11/01/00	Initial Release.

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i - iv	A				
1 - 30	A				

Revision History

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Chapter 1

SAFETY NOTICES

WARNING

Quantum Medical Imaging, LLC disclaims all responsibility from any injury resulting from improper application of this equipment.

This equipment is sold to be used exclusively under the prescribed direction of a person who is licensed by law to operate equipment of this nature. This equipment must be used in accordance with all safety procedures described in this manual and must not be used for purposes other than those described herein.

Quantum Medical Imaging, LLC cannot assume responsibility for any malfunctioning of this equipment resulting from improper operation, maintenance, or repair, or from damage or modification of its components.

Failure to observe these warnings may cause serious injuries.

X-RAY PROTECTION

X-rays are hazardous to both patient and operator unless established safe exposure factors and operating instructions are observed.

It is important that everyone having anything to do with x-radiation be properly trained and fully acquainted with the recommendations of the National Council on Radiation Protection and Measurements as published in NCRP Reports available from NCRP Publications, 7910 Woodmont Avenue, Suite 800, Bethesda, Maryland 20814-3095 (www.ncrp.com), and of the International Commission on Radiological Protection (www.icrp.org), and take adequate steps to protect against injury.

X-ray equipment may cause injury if used improperly. The instructions contained in this manual must be read and followed when operating this unit. Personal radiation monitoring and protective devices are available. You are urged to use them to protect against unnecessary x-ray exposure.

Chapter 1 Safety Notices

REGULATORY COMPLIANCE

This certified Quantum Medical Imaging, LLC medical device has been designed, manufactured, and calibrated to comply with governing Federal Regulations 21 CFR Subchapter J and the performance standards attendant thereto. Upon installation, all certified products require the filing of Form FD-2579 "Report of Assembly of a Diagnostic X-ray System" by the assembler (i.e., the installer) with the appropriate agencies; the "Installation Quality Assurance Checklist" must also be completed and properly distributed upon installation. A copy of each form (pink copy) is provided to the user. The installation report is completed by the installer and returned to Quantum Medical Imaging, LLC.

Those responsible for the planning of x-ray equipment installations must be thoroughly familiar and comply completely with NCRP Report No. 49, "Structural Shielding Design and Evaluation for Medical Use of X-Rays and Gamma Rays of Energies up to 10 MeV", as revised or replaced in the future. Those authorized to operate, test, participate in or supervise the operation of the equipment must be thoroughly familiar and comply completely with the currently established safe exposure factors and procedures described in publications such as Subchapter J of Title 21 of the Code of Federal Regulations, "Diagnostic X-Ray Systems and Their Major Components," and NCRP Report No. 102, "Medical X-Ray, Electron Beam and Gamma Ray Protection for Energies Up to 50 MeV—Equipment Design and Use" as revised or replaced in the future.

Scheduled maintenance is essential to the assurance of continued integrity of this equipment with respect to regulatory compliance. The continuance of certified performance to the regulatory standard is incumbent upon the user's diligent conformance to recommended maintenance instructions.

This product has been classified as Class I, Type B by Underwriters Laboratories, Inc. Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or with nitrous oxide.

The following symbols may be used for marking on this equipment or equipment documentation:

Earth (ground)

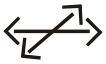
Protective Earth (ground)

Dangerous Voltage

Enable Tabletop Up Motion

Type B Equipment

Attention, consult accompanying documents



Enable tabletop float (releases transverse and longitudinal locks)

Enable Tabletop Down Motion

Chapter 1 Safety Notices

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Chapter 2

GENERAL INFORMATION

Chapter 2 General Information

OVERVIEW

This manual provides information for installing, operating, and maintaining Quantum Medical Imaging's Fixed (Model QT-740) and Elevating (Model QT-750) Radiographic Tables (hereinafter referred to as the radiographic table). It is imperative that all safety procedures described in this manual be strictly adhered to in order to ensure the safety of both patient and user.

NOTE

The user should read this manual in its entirety prior to using this equipment. It should be kept in a location near the equipment and readily accessible to the those that operate it.

The key features of the Model QT-740 and QT-750 radiographic tables are as follows:

- Large Tabletop area (85 inches long x 34 inches wide) provides ample examination platform
- Four-way floating tabletop permits 36 inches of longitudinal travel and 10 inches of lateral travel for full radiographic coverage
- Foot pedal controls for table float-top motions (foot pedal inhibit switch deactivates foot pedals to prevent inadvertent tabletop motion)
- Push button FLOAT control provided for operator convienence
- Small patient-to-film plane distance provides improved radiography with minimal magnification
- Accepts all types of image receptors (buckies, grids, and stationary grid cabinets)
- Patient handgrips are standard accessory
- AC line cord, fitted with hospital-grade plug, plugs into a 115VAC, 50/60 Hz receptacle (also configurable for 220 VAC, 50/60 Hz power input)
- The Image Receptor Cabinet is equipped with electric locks ensuring precise film receptor alignment

In addition, the Model QT-750 provides:

- Heavy-duty lift mechanism allows for patient loads of up to 650 lbs. (weight must be centered over table base)
- Variable height tabletop, lowers to 21 inches and raises to 32.5 inches (11.5 inches total vertical travel)
- Foot pedal controls for table up/down motions
- Collision sensors disable tabletop down motion in the event an obstruction is detected below tabletop

INTENDED USE

The Fixed Float-top (Model QT-740) and Elevating Float-top (Model QT-750) Radiographic Tables are intended for use as a patient support device during the performance of radiographic examinations.

MAIN COMPONENTS

See Figure 1. The radiographic table contains:

1 Tabletop

2 Emergency Shut-off Switch (Model QT-750 only)

3 Foot Pedal/FLOAT Push Button Inhibit Switch

4 Base

5 Foot Pedal(s) - Float (Model QT-740)
Float, Up and Down (Model QT-750)

6 Float Push Button Switch

7 Patient Handgrips

8 Image Receptor Lock Release Switch

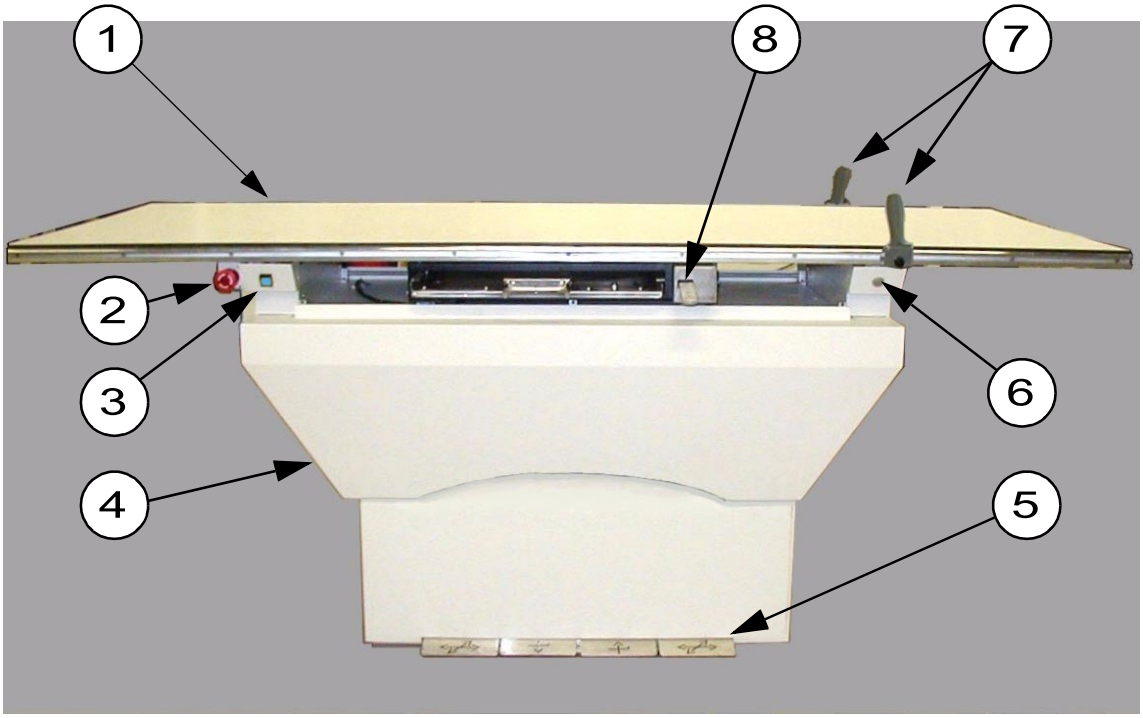

Figure 1. Radiographic Table Main Components

Chapter 3

OPERATION

OVERVIEW

To provide precise patient positioning, Model QT-740 and QT-750 radiographic tables feature a tabletop that "floats" in four directions; transversely (forward and backward) and longitudinally (left and right). Model QT-750 has the additional capability of tabletop elevation (i.e., the tabletop can be raised and lowered to facilitate patient transfer on and off the table).

TABLE CONTROLS

WARNING! All movable assemblies and parts of this equipment must be operated with reasonable care. Manufacturer's equipment recommendations described in this manual must be observed.

WARNING! To avoid damage to the table, any load on table top should be distributed as evenly as possible over the support surface. Do not seat patient at extreme ends of tabletop when tabletop is not centered. Patients weighing more than approximately 300 lbs. (136 kg) should only be transferred on or off the table from front side - in the center.

WARNING! Do not allow patient to place his/her hands along the side or below the table rail. Injury to the patient's hands and/or fingers is possible.

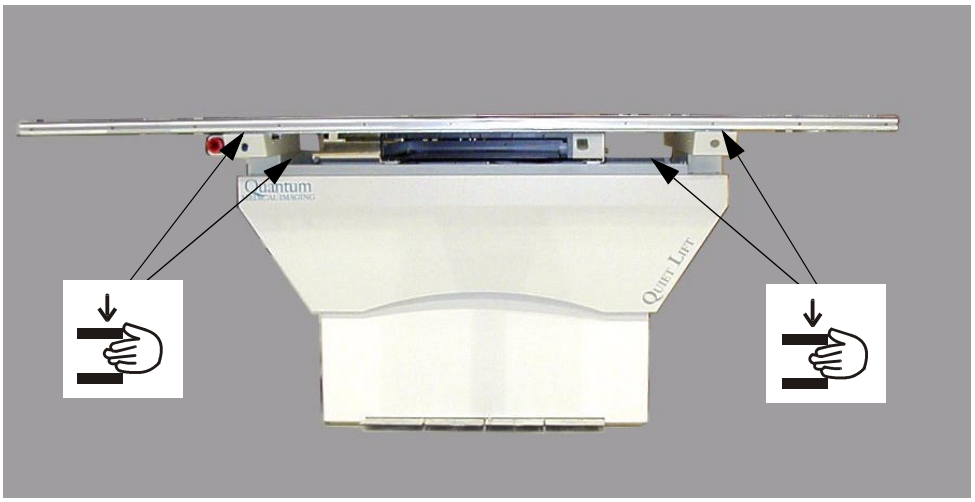

Figure 2. Areas Indicated to Keep Hands/Fingers Away From

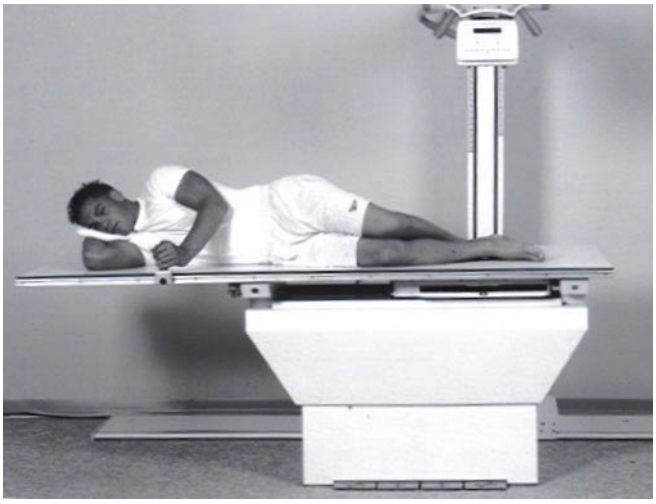

Figure 3. Patient Positioned on Tabletop

TABLETOP FLOAT MOTION (ALL MODELS)

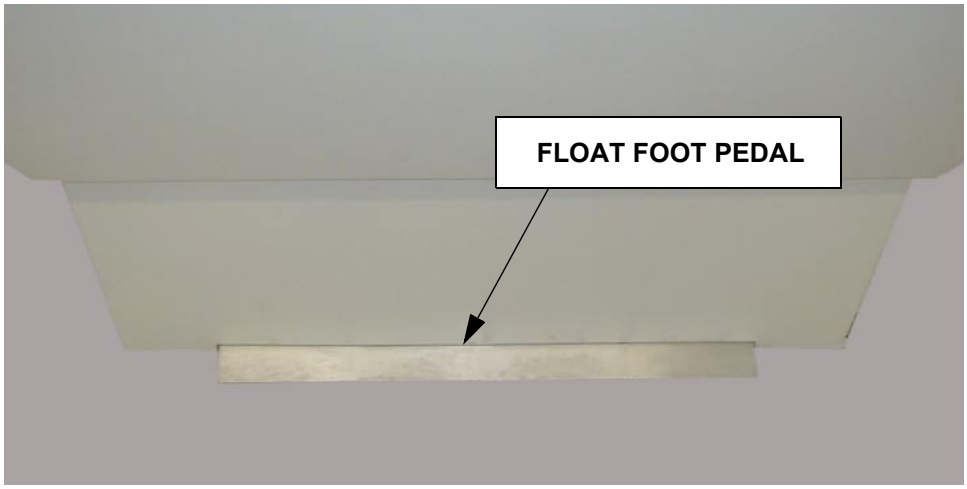

Figure 4. Model QT-740 FLOAT Foot Pedal Control

Models QT-740 and QT-750 both feature a "floating" tabletop. With the "float-top" function activated, both transverse and longitudinal positioning of the patient is enabled. To operate the float-top function, proceed as follows:

WARNING! When transferring a patient on or off the tabletop, always make sure the tabletop is locked. If necessary, the Foot Pedal Disable Switch may be activated to prevent unintended activation of the FLOAT foot pedal control.

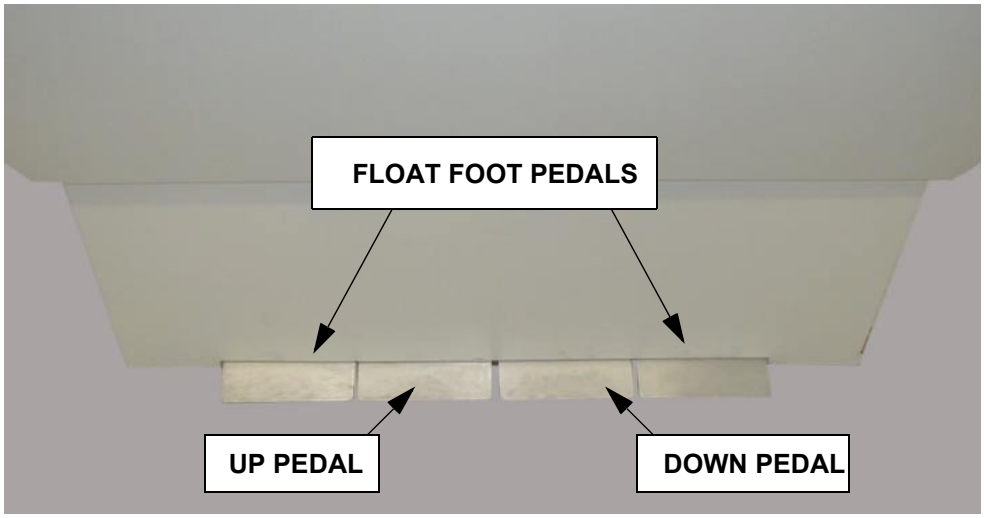

Figure 5. Model QT-750 - Foot Pedal Controls

1. Position the patient on the table with his or her hands situated along the side of their body, or with the hands grasping the patient handles (see Figure 3). Be sure that the hands remain above the tabletop.
2. Press the FLOAT foot pedal (see Figures 4 and 5) to enable transverse and/or longitudinal motion of the tabletop. (When the foot pedal is pressed, it releases electromagnets (locks) that prevent transverse and longitudinal tabletop motion.)
3. Releasing the FLOAT foot pedal immediately activates tabletop locks, inhibiting transverse and longitudinal tabletop motion.

ELEVATING MOTION (MODEL QT-750 ONLY)

On Model QT-750 radiographic tables, the elevation function allows the tabletop to be lowered down to as low as 21 inches (533.4 mm) from floor, up to a working height of 32.5 inches (825.5 mm). To operate the tabletop elevation function, proceed as follows:

WARNING! For safety purposes, an Emergency Stop Switch (see Figure 6) immediately removes power from the tabletop up/down motor when activated. Rotating the Emergency Stop Switch knob 1/4-turn counterclockwise releases the Emergency Stop Switch and restores power.

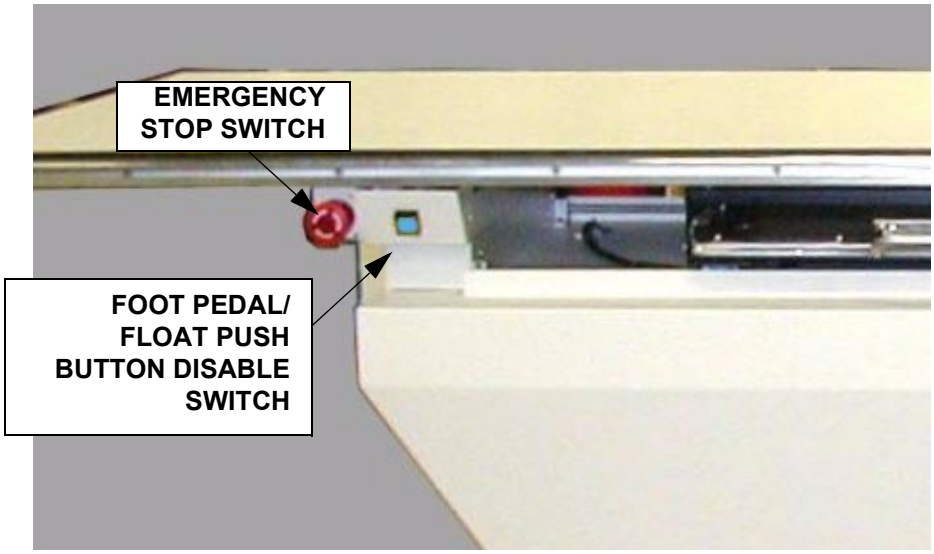

Figure 6. Emergency Stop and Pedal Disable Switch Locations

LOWERING THE TABLETOP

1. It is recommended that the tabletop be centered before lowering it (refer to Tabletop Float Motion operation in preceding paragraph).
2. Press the DOWN foot pedal (see Figure 5) to lower the tabletop to the desired height.
3. Transfer patient onto tabletop.
4. Ensure patient is positioned with his or her hands situated along the side of their body, or with the hands grasping the patient handles (see Figure 3). Be sure patient's hands remain above the tabletop.

Note: As it is lowered, the speed at which the tabletop travels will gradually be reduced until the tabletop reaches the lowest point of travel for optimal patient comfort.

RAISING THE TABLETOP

1. Press the UP foot pedal (see Figure 5) to raise the tabletop to the desired height.
2. Proceed with examination.

NOTE

Model QT-750 tables are equipped with Obstruction Sensors, which detect the presence of an obstruction below the tabletop when the tabletop is being driven downward. This feature is only designed to avoid damage to the table and is not intended as a safeguard against personal injury.

FOOT PEDAL/FLOAT PUSH BUTTON DISABLE SWITCH

To prevent accidental activation of the foot pedal controls (i.e., FLOAT foot pedal on Model QT-740 and FLOAT, UP, and DOWN foot pedals on Model QT-750) and the FLOAT push button, a Foot Pedal Disable Switch is provided. This switch is located below the front table rail on the left end of the table (see Figure 6). Pressing the switch until the switch light is illuminated disables all foot pedal functions (and the FLOAT push button switch). When the Foot Pedal Disable Switch light is not illuminated, the foot pedals and FLOAT push button switch are fully operational.

IMAGE RECEPTOR CABINET LOCK

The Image Receptor Cabinet rides on four linear ball-bearings mounted to adjustable brackets attached to either side of the cabinet (see Figure 7). These bearings travel on the hardened and polished steel shafts of the Receptor Cabinet Carriage. An electromagnet on the underside of the housing "locks" the cabinet into place until the LOCK RELEASE switch is depressed, thereby releasing the magnet's hold and allowing free movement of the cabinet.

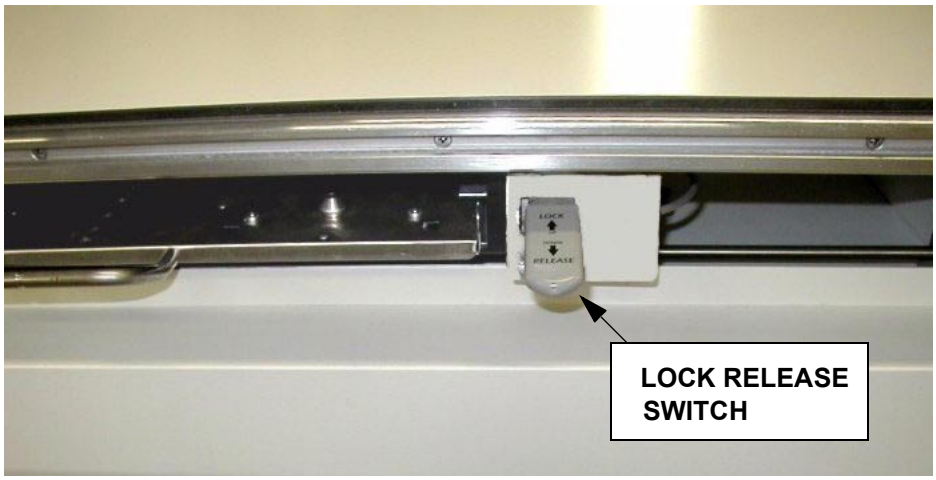

Figure 7. Image Receptor Cabinet LOCK RELEASE Switch

CASSETTE TRAY OPERATION

The radiographic table is equipped with either a Midwest or Poersch cassette tray, depending on the system ordered. The following paragraphs describe the operating instructions for each. Additional information is contained in the cassette tray manufacturer's documentation, which is provided with the table.

Loading Cassette Tray (Midwest Type)

To load a film cassette into a "Midwest" type cassette tray, proceed as follows:

1. Float the table top fully back.
2. Pull cassette tray from receptor using tray handle (see Figure 8).
3. Pull back on front cassette grip to open both grips.
4. Position slide guides ("L" brackets seated in channels) to cassette size using indicators on cassette tray (press center brass button to allow movement).
5. Insert cassette into tray (back end first).
6. Lock cassette into tray.
7. Push front grip against cassette.
8. While pushing front grip against cassette, turn cassette lock handle to lock position.
9. Push tray into receptor. The cassette is now in exposure position.

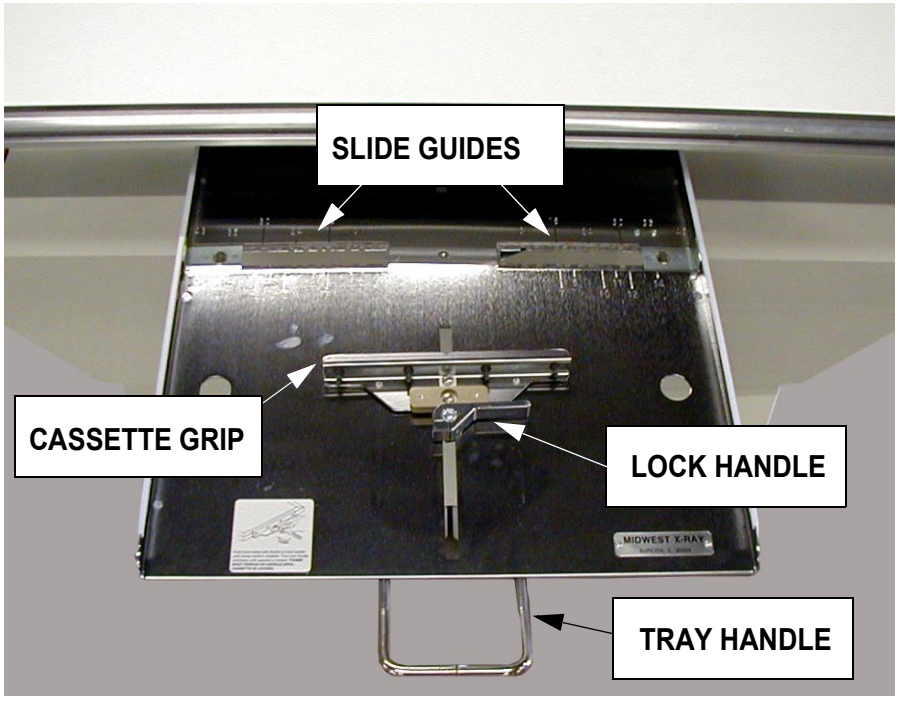

Figure 8. Midwest Cassette Film Tray

Loading Cassette Tray (Poersch Type)

To load a film cassette into a "Poersch" type cassette tray, proceed as follows:

1. Float the table top fully back.
2. Pull cassette tray from receptor using tray handle (see Figure 9).
3. Place thumb under lip of clamp handle. Lift handle to release.
4. Grasp handle and slide clamp back for inserting cassette.
5. Insert cassette into tray (back end first). Center it using centering label.
6. Slide clamp forward pushing clamp firmly against cassette.
7. While pushing clamp against cassette, press clamp handle down.

Figure 9. Poersch Cassette Film Tray

Chapter 3 Operation

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Chapter 4

USER MAINTENANCE

OVERVIEW

This chapter is designed to assist the system user in maintaining the smooth operation of the table. The user is responsible for performing certain routine maintenance and inspection procedures. Aside from routine maintenance, any abnormal noise, vibration, or unusual performance should be investigated by a qualified service representative. Preventive maintenance or any repair service should be performed only by qualified service personnel.

WARNING! Failure to follow manufacturer's or service personnel's recommendations may result in serious injury.

USER MAINTENANCE

User maintenance consists of the following activities, which should be performed on a daily basis:

- Visually inspect the table for wear and cleanliness
- Clean the tabletop, cassette tray, and exterior painted surfaces of the table

Cleaning

The system user is responsible for the basic cleanliness of the equipment. On a regular basis, the table surface should be wiped clean. Painted metal surfaces should be cleaned using a clean cloth slightly moistened in warm soapy water (use mild soap). Wipe with a clean wet cloth, then dry. Never use abrasive polish on this equipment.

WARNING! Always disconnect the equipment from the main power supply prior to any cleaning. On 115 VAC systems, the power supply cord is the power disconnect device. On 230 VAC systems, the power disconnect device is either the generator circuit breaker (when generator is power source) or the main disconnect (or power cable) on systems wired directly to facility power.

To remove the cassette tray from the Receptor Cabinet for cleaning, proceed as follows:

Midwest Trays

1. Float the table top fully back.
2. Pull the cassette tray out by the handle until it stops.
3. Grasp both sides of the tray with your right hand placed near the table and your left hand towards the tray front.

4. Locate the spring-loaded lever on the right side of the tray bottom. A spring-loaded plate covers this hole. Press the lever with your right index finger, lift the cassette tray up slightly and pull the tray away from the Receptor Cabinet.

Poersch Trays

1. Float the table top fully back.
2. Pull the cassette tray out by the handle until it stops.
3. Grasp the left side of the tray with your left hand.
4. Locate the square block at the back right side of the cassette tray. A spring-loaded plate is on the front side of the block. While pressing the plate, pull the tray out from the Receptor Cabinet.

Chapter 5

WARRANTY INFORMATION

WARRANTY STATEMENT

Quantum Medical Imaging, LLC (herein known as "QMI") warrants to buyer that any new product manufactured by QMI will be free from defects in material and manufacturing and conform substantially to applicable specifications in effect on the date of shipment when subjected to normal, proper and intended usage by properly trained personnel.

All QMI products shall be warranted for a period of 12 months from the time of original installation, the date of which will be determined by a completed, returned warranty card, which must be returned within 30 days of system installation. In no case shall the warranty exceed 15 months from the date of shipment. If the warranty card is not returned to QMI, then the warranty shall take effect 12 months from the date of shipment by Quantum Medical Imaging. Buyers should complete one (1) form per system or component, if items are ordered separately.

WARRANTY CARD

Cut along dashed line

Name of Owner _____

Name of Facility _____

Address 1 _____

Address 2 _____

City _____ **State** _____

Country _____ **Zip** _____

Phone _____

e-mail _____

Name of Distributor _____

Installation Date _____

Check Type of Equipment and Provide ID No.'s:

	Model No.:	Serial No.:
☐ Hi-Freq. Generator		
☐ Table		
☐ Collimator		
☐ Hi-Tension Cable		
☐ Tube		
☐ Tube Stand		
☐ Wall Stand		
☐ Other		

Chapter 5 Warranty Information

WARRANTY STATEMENT (Continued)

Fill in and mail Warranty Card promptly to:

Quantum Medical Imaging, LLC
2905 Veterans Memorial Highway
Ronkonkoma, N.Y. 11779 USA

Any component furnished without charge to Buyer/Dealer during the warranty period to correct a warranty failure shall be warranted only to the extent of the unexpired term of the warranty of the original product. This warranty extends only to the original purchase and is not transferable unless authorized in writing by Quantum Medical Imaging.

Products manufactured by parties other than QMI, where QMI acts solely as distributor or reseller, will carry their respective manufacturers' warranties.

Warranty consideration will be given only for defective QMI products properly returned to the factory in accordance with QMI's warranty return procedure (refer to Dealer Price Book or contact Quantum Medical Imaging, LLC. customer service).

WARRANTY EXCLUSIONS

The foregoing warranties are exclusive and in lieu of all other warranties, whether written, oral, express, implied or statutory. NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE SHALL APPLY. QMI Warranty is exclusive of:

1) Failure of Buyer/Dealer to prepare the site or provide power requirements or operating environmental conditions in compliance with any applicable instructions or recommendations of Quantum Medical Imaging.
2) Failure of Buyer/Dealer to provide the proper incoming power required to support the equipment in accordance with the recommendation of QMI.
3) Any modification of product performed by a party other than Quantum Medical Imaging.
4) Combining incompatible products.
5) Improper or extraordinary use of the Product, improper maintenance of the Product, or failure to comply with any applicable instructions or recommendations of Quantum Medical Imaging.
6) Misuse, tampering or, negligent storage/handling of the Product by Buyer, its employees, agents or contractors.
7) Fuses and other items deemed by QMI to be expendable.
8) Acts of God, acts of civil or military authority, fires, floods, power failure or electrical power surges, strikes or other labor disturbances, war riots or other causes beyond the reasonable control of Quantum Medical Imaging.
9) Installation, troubleshooting or repair service are not included in this warranty. Technical service and maintenance is the responsibility of the dealer selling the equipment.
10) The Manufacturer is relieved of any responsibility for damage during shipment after the freight carrier transports the unit for delivery.

BUYER'S REMEDIES

If Quantum Medical Imaging determines that any Product fails to meet any warranty during the applicable warranty periods, Quantum Medical Imaging shall correct any such failure as follows:

A) By repairing, adjusting, or replacing any defective or non-conforming Parts or Products.
B) By making available any necessary repaired or replacement parts or assemblies.

Quantum Medical Imaging shall have the option to furnish either new or exchange replacement parts or assemblies. All returned parts shall become the property of Quantum Medical Imaging.

The preceding Paragraphs set forth Buyer's Remedies and Quantum Medical Imaging's sole liability for claims based upon failure of the product to meet any warranty, whether the claim is on contract, warranty, Tort (including negligence and strict liability) or otherwise, and however instituted. And upon the expiration of the applicable warranty period, all such liability shall terminate. In no event shall Quantum Medical Imaging be liable for special or consequential damages.

The warranties and remedies available to the buyer are conditioned upon all claims under this warranty being made in accordance with the aforementioned warranty statement.

Chapter 5 Warranty Information

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